Order Code RL34477

# CRS Report for Congress

## Extending NASA's Exemption from the Iran, North Korea, and Syria Nonproliferation Act

**Updated July 30, 2008**

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Prepared for Members and Committees of Congress

# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **30 JUL 2008** | **N/A** | **-** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **Extending NASAs Exemption from the Iran, North Korea, and Syria Nonproliferation Act** | 5b. GRANT NUMBER |
| | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) | 5d. PROJECT NUMBER |
| | 5e. TASK NUMBER |
| | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Congressional Research Service Library of Congress 101 Independence Ave, SE Washington, DC 20540-7500** | 8. PERFORMING ORGANIZATION REPORT NUMBER |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |

12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release, distribution unlimited**

13. SUPPLEMENTARY NOTES
**The original document contains color images.**

14. ABSTRACT

15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | **SAR** | **10** | |

# Extending NASA's Exemption from the Iran, North Korea, and Syria Nonproliferation Act


## Summary

The Iran Nonproliferation Act of 2000 (INA) was enacted to help stop foreign transfers to Iran of weapons of mass destruction, missile technology, and advanced conventional weapons technology, particularly from Russia. Section 6 of the INA banned U.S. payments to Russia in connection with the International Space Station (ISS) unless the U.S. President determined that Russia was taking steps to prevent such proliferation. When the President in 2004 announced that the Space Shuttle would be retired in 2010, the Russian *Soyuz* became the only vehicle available after that date to transport astronauts to and from the ISS. In 2005 Congress amended INA to exempt *Soyuz* flights to the ISS from the Section 6 ban through 2011. It also extended the provisions to Syria and North Korea, and renamed it the Iran, North Korea, and Syria Nonproliferation Act (INKSNA).

NASA has now asked Congress to extend the exemption for the life of the ISS, or until U.S. crew transport vehicles become operational. As in 2005, an exemption would be needed before payments could be made to Russia since the President has not made a determination pursuant to Section 6(b) of the INKSNA regarding Russian nonproliferation policy or proliferation activities to Iran, North Korea or Syria.

Since 2005, Russia has stepped up cooperation with the United States and countries over Iran's nuclear program. President Bush has praised Russian President Putin for his "leadership" in offering a solution to the Iranian nuclear negotiations.

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## Introduction

The United States has grave concerns about the proliferation threat posed by Iran's pursuit of nuclear, chemical, and biological weapons, ballistic missiles, and advanced conventional weapons. The United States has passed laws and used sanctions to deter countries such as Russia, China, and North Korea from providing related technologies to Iran.[1] The Iran Nonproliferation Act of 2000 (INA, P.L. 106-178) added two new provisions to the existing laws: it widened some of the sanctions applicable to foreign persons, and, in Section 6, contained a ban on U.S. government payments to Russia in connection with the International Space Station unless the U.S. president makes a determination that Russia is taking steps to prevent proliferation of weapons of mass destruction (WMD), and ballistic and cruise missiles, to Iran. This provision raised difficulties regarding U.S. access to the International Space Station when President Bush in 2001 cancelled NASA's planned Crew Return Vehicle (CRV), which was to act as a "lifeboat" for the astronauts on the ISS, leaving them dependent on the *Soyuz.* The President's announcement in 2004 that the space shuttle fleet would be retired in 2010 further increased that dependence.

## The International Space Station (ISS) and Nonproliferation

The International Space Station (ISS) is a research laboratory in space being built as a U.S.-led international partnership. Long-duration "Expedition" crews composed of Russian and American astronauts have occupied the ISS since November 2000, rotating on 4-6 month schedules.[2]

Europe, Canada, and Japan became partners in NASA's space station program in 1988. The United States invited Russia to join in 1993, motivated in part by nonproliferation concerns. Through the "Gore-Chernomyrdin Commission," the Clinton Administration sought to encourage Russia to abide by the Missile Technology Control Regime (MTCR) to stop sales of ballistic missile technology. On September 2, 1993, Vice President Gore announced that Russia would join the space station program and that Russia had agreed to abide by the MTCR (which it would join formally in 1995). The United States agreed to pay Russia $400 million

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[1] For details see CRS Report RL32048, *Iran: U.S. Concerns and Policy Responses*, by Kenneth Katzman.

[2] For details see CRS Report RL33568, *The International Space Station and the Space Shuttle*, by Carl E. Behrens.

for space station cooperation. On October 6, 2003, White House Science Adviser John Gibbons told a congressional subcommittee that the initiative "fits into the context of a much larger partnership with Russia," adding that the negotiations "produced a key understanding that Russia is committed to adhere to the guidelines" of the MTCR.[3] Clinton Administration officials reiterated this linkage during the mid-to-late 1990s.

## INA Origins

While U.S. cooperative programs with Russia were expanding, it also became clear that Russia was a source of sensitive technology to Iran. In 1995, Russia signed an agreement with Iran to finish construction of the Bushehr nuclear power reactor, a transaction worth $800 million or more. In 1996, reports surfaced of Russian entities providing ballistic missile assistance to Iran, including training; testing and laser equipment; materials; guidance, rocket engine, and fuel technology; machine tools; and maintenance manuals.[4] Director of Central Intelligence George Tenet testified to the Senate Intelligence Committee in early 1998 that Iran was further along in its ballistic missile program than previously estimated because of Russian help.[5] The "Rumsfeld Commission" on the ballistic missile threat concluded in 1998 that "Russian assistance has greatly accelerated Iran's ballistic missile program."[6] The report estimated that Iran could have an ICBM capability within five years of a decision to proceed.

The 105th Congress responded with H.R. 2709, the Iran Missile Proliferation Sanctions Act. Passed by overwhelming margins, the bill required the United States to impose sanctions against countries that proliferated ballistic missile technology to Iran. President Clinton vetoed the bill on June 23, 1998, objecting to low evidentiary thresholds and mandatory sanctions. He forestalled an attempt to override his veto by imposing sanctions on seven Russian entities that Moscow began to investigate in mid-July for alleged illegal exports to Iran. The sanctions were imposed under Executive Order 13094, which expanded the President's authority to ban U.S. trade with, aid to, and procurement from foreign entities assisting WMD programs in Iran or elsewhere.

Iran conducted the first test flight of its medium-range Shahab-3 missile that summer, however, and reports of Russian assistance persisted. On May 20, 1999, House International Relations Committee Chairman Gilman introduced H.R. 1883, the Iran Nonproliferation Act, covering ballistic missiles, WMD, and advanced

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[3] House Committee on Science, Space, and Technology, Subcommittee on Space. U.S.-Russian Cooperation in the Space Station Program: Parts I and II. Hearing, October 6, 14, 1993, p. 45.

[4] For details see CRS Report RL30551, *Iran: Arms and Weapons of Mass Destruction Suppliers*, by Kenneth Katzman.

[5] Available at [http://www.cia.gov/cia/public_affairs/speeches/1998/dci_speech_012898.html]

[6] Executive Summary of the Report of the Commission to Assess the Ballistic Missile Threat to the United States. [http://www.house.gov/hasc/testimony/105thcongress/BMThreat.htm].

conventional weapons. According to the committee's report, the bill was "designed to give the Administration additional tools with which to address the problem and the countries that are transferring dangerous weapons technology to Iran powerful new reasons to stop proliferating.... In addition, it seeks to create new incentives for the Russian Space Agency to cooperate in efforts to stem the proliferation of weapons technology to Iran."[7] The bill allowed sanctions, but they were not mandatory as in the previous legislation. The House and Senate each passed the INA unanimously, and it was signed into law on March 14, 2000 (P.L. 106-178).

### INA's Section 6 and the ISS

Section 6 of the INA concerns payments by the U.S. Government to Russia in connection with the ISS. On July 29, 1999, during markup of Section 6 by the House Science Committee's Subcommittee on Space and Aeronautics, Science Committee Chairman James Sensenbrenner explained that "Earlier this year, there were publications of the fact that entities of the Russian Space Agency were violating the MTCR. That's why there is Section 6 in this bill."[8]

From 1994-1998, NASA had paid Russia approximately $800 million through several contracts for space station-related activities. Those payments ended because Section 6 prohibits the U.S. government from making payments in connection with ISS to the Russian space agency, organizations or entities under its control, or any other element of the Russian government, after January 1, 1999. Exceptions are made for payments needed to prevent imminent loss of life by or grievous injury to individuals aboard ISS (the "crew safety" exception), and for various other payments. The prohibition may be lifted if the President makes a determination that Russia's policy was to oppose proliferation to Iran, that Russia was demonstrating a sustained commitment to seek out and prevent the transfer of WMD and missile systems to Iran, and that neither the Russian space agency nor any entity reporting to it had made such transfers for at least one year prior to such determination. Neither President Clinton nor President Bush has made such a determination.

## Amending the INA: P.L. 109-112

On January 14, 2004, President Bush made a major space policy address directing NASA to focus its activities on returning humans to the Moon and eventually sending them to Mars. Inspired in part by the destruction of the space shuttle *Columbia* the previous year, his "Vision for Space Exploration" included retiring the space shuttle in 2010. The President said the United States would fulfill its commitments to its space station partners to finish construction of the ISS, for which the shuttle was the only vehicle capable.

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[7] H.Rept. 106-315, Part 1, p. 8.

[8] House Committee on Science. Markups of H.R. 356, H.R. 1883, H.R. 2607, and H.R. 2767. July 29, September 9, and November 3, 1999, p. 44.

At the time President Bush made his "Vision" speech, the space shuttle fleet was shut down, while a review of the *Columbia* disaster determined the cause and necessary safety measures to be taken. Transporting astronauts to and from the ISS was carried out only in Russian *Soyuz* space vehicles until the shuttle *Discovery* returned to flight in July 2005. In addition, the cancellation of NASA's planned CRV left the ISS dependent on the *Soyuz* as a "lifeboat" for return of crew members in case of an emergency, since the shuttle could not be permanently attached to the ISS because of power demands. Russia expected to be paid for the *Soyuz* lifeboat service beginning in 2006. Retirement of the shuttle in 2010 would leave the United States without capability to transport astronauts to the ISS until a new vehicle is developed (as contemplated for the Moon/Mars mission). Transport to and from the ISS will again have to rely on *Soyuz* in the interim.

Because of these developments, NASA applied to the Congress for an exemption from the INA that would allow it to contract with Russian space entities for use of the *Soyuz* for ISS missions. The response was the Iran Nonproliferation Amendments Act of 2005 (P.L. 109-112).

## Passage of P.L. 109-112

Since the President had not made the required determination under Section 6(b) of the INA, an amendment was needed to continue American access to the ISS. Senator Lugar introduced the amendment as S. 1713, the Iran Nonproliferation Amendments Act of 2005. A debate in Congress ensued, with critics questioning whether exempting payments for the ISS would encourage Russia to continue alleged proliferation activity. Supporters of the amendment argued that the exemption was strict enough to only allow for ISS-related expenses for a temporary period of time and would not impact nonproliferation policy.[9]

P.L. 109-112, passed on November 22, 2005, gives an exemption to the nonproliferation certification requirement for U.S. government payments made prior to January 1, 2012, related to the ISS. As part of the amendment, the House applied the nonproliferation penalties to such trade with Syria as well as Iran, and the act was renamed the Iran and Syria Nonproliferation Act. This addition was reportedly to strengthen and extend the nonproliferation aspects of the law to counterbalance the weakening of the nonproliferation provisions vis a vis Russia.[10] The Amendment directs the President to submit to the Senate Foreign Relations Committee and the House International Relations Committee a report that identifies each Russian entity or person to whom the United States has, since the enactment of the INA in 2005, made a cash or in-kind payment under the Agreement Concerning Cooperation on the Civil International Space Station, and specifies the content of the report.

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[9] See Guy Gugliotta, "NASA Seeks Clearance to Buy Russian Technology," *The Washington Post*, September 16, 2005. [http://www.washingtonpost.com/wp-dyn/content/article/2005/09/15/AR2005091502045.html]

[10] William Huntington, "Congress Amends Nonproliferation Act," *Arms Control Today*, December 2005. [http://www.armscontrol.org/act/2005_12/Dec-NonproAct.asp]

A further amendment, P.L. 109-353 of October 13, 2006, added North Korea to the act. The act is now known as the Iran, North Korea, and Syria Nonproliferation Act (INKSNA).

# Current Plans for the ISS

Following President Bush's "Vision" plan, NASA has begun designing spacecraft for resuming flights to the Moon, and has indicated that such vehicles would also be available for missions to the ISS. It has also continued flights of the space shuttle to the ISS, and plans enough flights to finish the ISS before the shuttle is retired in 2010.

Under the exemption provided in P.L. 109-112, NASA has also contracted with Russian space entities to continue astronaut flights to and from the ISS. However, the exemption runs out in 2012. On April 11, 2008, NASA Administrator Michael Griffin submitted a proposed amendment to INKSNA that would extend the exemption for Soyuz flights for the life of the ISS, or until the Moon flight vehicle, or a commercial crew transport vehicle, is fully operational. The exemption would not be extended for the Russian *Progress* cargo vehicle.[11] In a letter to Chairman Udall of the Subcommittee on Space and Aeronautics, Committee on Science and Technology, and to Senator Biden, Chairman of the Senate Committee on Foreign Relations, Griffin said that fabrication of Soyuz vehicles requires 36 months, so that NASA must contract with Russian entities in 2008 for vehicles to be available in 2012. Extension of the INKSNA exemptions would have to be enacted before such contracting could take place.

On June 9 Senator Biden introduced by request S. 3103, the International Space Station Payments Act of 2008, incorporating the measures requested by NASA.

On July 24 the House Foreign Affairs and Science and Technology Committees reported by voice vote H.R. 6574, the United States-Russian Federation Nuclear Cooperation Agreement Act of 2008. Title III of H.R. 6574, as reported, would extend exemption of payments until July 1, 2016, or until a U.S. flight vehicle is operational. Like S. 3103, it would not extend to payments for Progress vehicles.

## Post-Shuttle Transport Options to the ISS

Continued flights of the space shuttle have been necessary to transport a number of massive components to complete construction of the ISS. The shuttle has also been the main means of carrying and returning astronauts to and from the ISS, although the Russian *Soyuz* craft has also transported some "Expedition Team" members. In addition, a *Soyuz* has been attached continuously to the ISS as a "lifeboat" to return ISS astronauts in case of an emergency in the space station. This is a function that the space shuttle cannot fulfil even while it is still operating, because it can only stay aloft for a limited time because of power needs.

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[11] [http://democrats.science.house.gov/Media/File/Commdocs/hearings/2008/Space/24apr/Hearing_Charter.pdf]

After the shuttle retires, only the *Soyuz* will be available for transporting astronauts to and from the ISS until NASA develops new crew and cargo vessels as part of the "Vision" to return to the Moon, now scheduled for 2015 or 2016.

In addition to crews, supplies and replacements for ISS components will need transport after the shuttle is retired. The Russian *Progress* vehicle has been used in the past, and would remain available, but the amendment requested by NASA would not include contracting for the *Progress* in the exemption extension. NASA has been investing in efforts by private industry to develop and produce transport vehicles that can take equipment and eventually crews to and from the ISS. This Commercial Orbital Transportation Services (COTS) program is still under development.

Another option under development is the European Space Agency's Automated Transfer Vehicle (ATV), the first of which was launched March 9, 2008, and carried out docking demonstrations with the ISS in April. Four more ATV's are planned for construction. Japan expects to follow in 2009 with launch of its H-II Transfer Vehicle (HTV). Unlike the space shuttle, but like *Soyuz* and *Progress*, neither the ATV or the HTV is a reusable vehicle.

Depending on the development of these options, some use of the Russian *Progress* vehicle may be necessary for transporting U.S. equipment and supplies to the ISS. Contracting such services would also probably require exemption from the INKSNA.

## Nonproliferation Issues Involving Extending INKSNA Exemption

As in 2005, an amendment would be needed before payments could be made to Russia since the President has not made a determination pursuant to Section 6(b) of the INKSNA regarding Russian nonproliferation policy or proliferation activities to Iran, North Korea or Syria. This is widely believed to be because the President would be unable to certify an absence of proliferation activities by Russian entities to these countries. The 2006 Director of National Intelligence report to Congress on WMD Acquisition says that "Russian entities have supplied a variety of ballistic missile-related goods and technical know-how to China, Iran, India, and North Korea. Iran's earlier success in gaining technology and materials from Russian entities and continuing assistance by such entities, probably supports Iranian efforts to develop new longer-range missiles and increases Tehran's self-sufficiency in missile production."[12]

In the past five years, after details about Iran's clandestine nuclear activities came to light, Russia has stepped up cooperation with the United States and other countries negotiating over Iran's nuclear program. Russia has insisted on IAEA

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[12] Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January to 31 December 2006, Office of the Director of National Intelligence. [http://www.dni.gov/reports/Acquisition_Technology_Report_030308.pdf]

safeguards on any transfers to Iran's civilian nuclear reactor at Bushehr and has delivered fuel to Bushehr beginning in December 2007, on condition that the resulting spent fuel will be returned to Russia. Russia has also invited Iran to participate in its newly established international uranium enrichment center at Angarsk, as an alternative to an indigenous Iranian enrichment capability. The Bush administration has supported this approach and since 2006 no longer objects to Russia's building the Bushehr nuclear power plant in Iran. President Bush, most recently at the April 2008 summit in Sochi, has praised Russian President Putin for his "leadership" in offering a solution to the Iranian nuclear negotiations. Russia has been only reluctantly supportive of U.N. Security Council resolutions imposing penalties, preferring a primarily diplomatic solution to the crisis.